UNITED STATES COAST GUARD

Address Reply To:
COMMANDANT
U. S. Coast Guard
Washington 25, D. C.

MVI
11 January, 1951
File: (MARY LUCKENBACH - MSTS BENEVOLENCE a-12 Bd)

From: Chief, Merchant Vessel Inspection Division
To: Commandant
Via: Chief, Office of Merchant Marine Safety

Subj: Marine Board of Investigation; collision SS MARY LUCKENBACH and MSTS Ship BENEVOLENCE, entrance San Francisco Bay, 25 August, 1950, with loss of life.

1. Pursuant to the provisions of Title 46 C.F.R., Part 136, the record of the Marine Board convened to investigate subject casualty, together with its Findings of Fact, Conclusions, and Recommendations, has been reviewed and is forwarded herewith.

2. The United States Military Sea Transport Service Hospital Ship SS BENEVOLENCE of 15,450 tons displacement, engaged on a trial run, was inbound in the main ship channel entrance to San Francisco Bay. The United States Freight Steamer MARY LUCKENBACH of 8,162 gross tons, fully loaded, was outbound from San Francisco for Philadelphia, Pa. The weather was dense fog. The BENEVOLENCE was using her radar for navigational purposes and the radar on board the MARY LUCKENBACH, because of malfunctioning, was secured. Both vessels were sounding regulation fog signals. Both vessels were proceeding at excessive speeds and collided at approximately 1655, 25 August, 1950, at the entrance to San Francisco Bay. At the moment of impact, it is estimated that the BENEVOLENCE was making a speed of 15 knots and the MARY LUCKENBACH a speed of 12 knots.

3. As a result of this casualty the BENEVOLENCE sank with the loss of 23 persons and the LUCKENBACH sustained bow damage.

4. The Board submitted the following report:

FINDINGS OF FACT

"1. That the United States S.S. MARY LUCKENBACH is a C-2 type cargo vessel, official number 254012 of 8,162 gross tons; 4804 net tons. She is 441.2' in length, 63.2' in breadth, 36.7' in depth, built in 1944 at Wilmington, North Carolina, and operated by the Luckenbach Steamship Company, Inc., 120 Wall Street, New York, N.Y., in the intercoastal trade. The vessel was last inspected 16 November, 1949, at New York, N.Y. The power is single screw gear turbine drive of 6,000 shaft horsepower under maximum steam pressure of 450 lbs. The vessel was equipped with both hand and automatic fog signals, gyro compass, radio-direction finder, radiotelephone and telegraph, fathometer and sound-powered telephone. The vessel was under enrollment on 25 August, 1950, and laden with 10,000 tons of general cargo.

Chief, MVI Division to
Commandant
Via: Chief, Office of MTS

MVI
11 January, 1951
File: (MARY LUCKENBACH -
USTS BENEVOLENCE a-12 Bd)

2. That the BENEVOLENCE (AH-13) is a hospital ship of the U. S. Navy, modified C-4 type, of 15,450 tons displacement. She is 520' in length, 71'6" in breadth and 43'6" in depth. Power is General Electric turbine with Falk reduction gear, developing 8,500 shaft horsepower under maximum steam pressure of 440 lbs. driving a single screw. It is equipped with emergency Diesel units. The BENEVOLENCE had recently been reactivated by the U. S. Navy, and was engaged in tentative acceptance trials preparatory to turning the vessel over to the Military Sea Transportation Service.

3. That the S.S. MARY LUCKENBACH, fully loaded with a draft of 27'04" forward, 29'07" aft, was bound for Philadelphia, Pennsylvania, via the Panama Canal. The vessel proceeded to sea passing under the center of the Golden Gate Bridge at 1635, 25 August, 1950, ship's time.

NOTE: The MARY LUCKENBACH's clocks were seven (7) minutes ahead of those of the BENEVOLENCE. All times used hereafter in this report are given as BENEVOLENCE's time.

4. When the MARY LUCKENBACH passed under the Golden Gate Bridge the estimated visibility was 300 to 400 yards due to fog. Course was 246° true. The gyro course recorder was not in operation. At this time speed was reduced from 15 knots or 75 RPM (21 nozzles) by giving "stand by engines." On this particular vessel this order called for 45 - 50 RPM (12 nozzles) or 9.5 knots. A 1.5 knot tidal current was setting with the MARY LUCKENBACH increasing her speed over the ground. However, this did not enter into the Master's calculation.

5. That immediately after passing under the Golden Gate Bridge, the following persons were on the bridge of the MARY LUCKENBACH: Leonard C. Smith, Master, at the conn; Gustave N. Peterson, Second Mate; Harry E. Williams, Third Mate; Samuel F. Tedder, Junior Third Mate; Ernest Travis, Radio Operator, at his station in the radio shack; Wilfred K. Morin, A.B., at the helm. Rinaldo L. Gurrea, O.S., was on bow lookout. The total persons on board numbered 45.

6. That the radar installed on the MARY LUCKENBACH was manufactured by Raytheon, model GO-1, and had been serviced during the vessel's in-port period. Except for minor adjustments to be made by the vessel's personnel after leaving the dock, the set was considered serviceable. Attempts to make these adjustments after sailing failed. The use of the radar was thereby considered unsatisfactory and was discontinued by order of the Master at 1625, when in the vicinity of Alcatraz Island. Personnel engaged in its operation lacked special training and were unskilled in making adjustments as well as in operational functions.

7. That at 1651, the MARY LUCKENBACH having passed under the Golden Gate Bridge and while proceeding down the Main Ship Channel on course 246° true, heard one whistle dead ahead. The engines were ordered "stopped", followed in a matter of seconds by "full astern." At 1652, the bow wave of the oncoming vessel was sighted dead ahead about 1200 feet distant. This vessel later proved to be the BENEVOLENCE. Simultaneously, the order of "hard right" was given the helmsman of the MARY LUCKENBACH, and four blasts of the whistle were sounded as a danger signal.

8. That at 1655 the BENEVOLENCE and MARY LUCKENBACH collided at an estimated angle of from 10° to 20°. The bluff of the MARY LUCKENBACH's port bow striking the BENEVOLENCE at frame 50, port side, high on the fo'c'sle head, with terrific impact. Both vessels heeled to starboard after the impact. A second impact, less severe, occurred when the MARY LUCKENBACH came in contact with the BENEVOLENCE's hull beneath that vessel's bridge structure.

9. That immediately after the collision the MARY LUCKENBACH ordered "hard left rudder" passing astern of the BENEVOLENCE and sounded the general alarm. At 1703 she let go the starboard anchor in 17 fathoms of water on the following bearings: Bonita Point, 041° true; San Francisco Light Vessel, 247° true.

10. That the weather at the time of the collision was foggy; wind northeast, force 2, smooth sea, visibility estimated to be from 200 to 600 yards.

11. That at 0800, 25 August, 1950, the BENEVOLENCE departed the Mare Island Naval Shipyard for the purpose of conducting limited sea trials to the satisfaction of the Deputy Commander, Military Sea Transportation Service, or his representative.

12. That these trials were being conducted on 25 August, 1950, under the control of the Commanding Officer of the BENEVOLENCE, Captain Barton E. Bacon, Jr., USN.

13. That under Captain Bacon's command was a Navy crew, personnel of Mare Island Group, Pacific Reserve Fleet, with a Military Sea Transportation Service civil service crew under the command of William L. Murray, the prospective master. Also on board and manning the medical spaces was a staff of the U. S. Navy Medical Corps, under Captain C. D. Riggs, M.C., USN, as well as representatives of the Pacific Reserve Fleet Headquarters, Deputy Commander, MSTS, and workmen from the Mare Island Naval Shipyard. The crew numbered approximately 39 U. S. Navy officers, 127 enlisted men, 154 medical corpsmen, USN, 174 officers and men from the MSTS, as observers, and 15 yard workmen.

14. That the civilian pilot of the BENEVOLENCE was Captain Lyle G. Havens, who was conning the vessel prior to and at the time of the collision.

15. That the BENEVOLENCE was equipped with model 1-G surface search radar, commonly referred to as "S.G. 1-B" manufactured by the Raytheon Corporation. This equipment was being operated by a Radio Electrician, U. S. Navy, on a range of 15,000 yards throughout the trial run. No positive explanation is advanced for failure to locate the MARY LUCKENBACH prior to the collision.

16. That during the conduct of the aforementioned trials the BENEVOLENCE at 1541 passed under the Golden Gate Bridge and proceeded down the Main Ship Channel towards the San Francisco Light Vessel and rounded the light vessel at a range of about 1500 yards.

17. That the BENEVOLENCE was in a "light load" condition drawing 19 feet forward, 23 feet aft. Forty-five percent (304,000 gallons) of the fuel capacity was on board. Tanks 303, 304 and 305 were filled with fresh water; ballast tanks and two other tanks were empty.

18. That at 1640 the BENEVOLENCE set course at 070° true, the gyro error being .85 easterly, and the BENEVOLENCE headed on the return to San Francisco at a speed of 88 RPM or 15.5 knots. Buoys No. 2 - 4 - 6 and 8 were passed abeam to starboard at a distance estimated to be from 75 to 100 yards off.

19. That at 1644 the standard speed of the BENEVOLENCE was set at 91 RPM or 16 knots, and at 1650 when abeam of buoy No. 5, the course was changed to 065° gyro, 066° true. At this time the vessel was steaming against a tidal current set of 1.5 knots.

20. That under the sole command of Captain Bacon, USN, on the bridge, immediately prior to the collision, was the civilian pilot conning, Lyle G. Havens; with civilian pilot, Raney B. Vreeland as observer; LCDR Julian I. Shocken, USN, Navigator; Radio Electrician W. R. Jackson, USN, at the radar; Captain William M. Murray, prospective MSTS master, as observer. The Executive Officer, CDR Merrill K. Clementson, USN, had arrived on the bridge about three minutes before the collision.

21. That in addition to the officers named in the preceding paragraph, the bridge detail was fully manned including the chief quartermaster, quartermasters, helmsman, and talkers, with all men at stations and the fog signal being sounded manually.

22. That three enlisted men, including a talker, were on the foc'sle head of the BENEVOLENCE as lookouts. Thirteen men and officers

under LT Martin E. McLean, USN, were at their stations in the engine room and fireroom. That eight of the nine men of the damage control detail were in the mess hall or chow line.

23. That Captain Bacon, Pilot Havens, Pilot Vreeland and Captain Murray, were standing on the catwalk forward of the pilothouse. The remainder of those above-mentioned with the bridge sea detail, except for a talker, were inside the pilothouse.

24. That at 1650 a fog signal was heard from dead ahead by Pilot Havens, the BENEVOLENCE then being on course 066° true making 16 knots by engines. "All stop" was immediately ordered by the Pilot and answered by engine room telegraph. In about two minutes another blast was heard much nearer and almost at once the bow wave of the opposing vessel, the MARY LUCKENBACH, was sighted emerging from the fog at an estimated distance of 1,000 yards.

25. That on sighting the MARY LUCKENBACH, Pilot Havens, at about 1652, ordered "right full rudder," and "two-thirds speed ahead." Seconds after the BENEVOLENCE commenced swinging slowly to the right. Simultaneously, the siren sounded the collision alarm.

26. That at 1655, while the two-thirds bell was being answered, both vessels collided, with the BENEVOLENCE heeling about 15° to starboard from the impact. The MARY LUCKENBACH, after the first contact on the port side of the foc'sle of the BENEVOLENCE, passed along that side with a grinding noise and again struck a lesser blow in the way of the bridge as the BENEVOLENCE righted herself and her stern swung to port. The MARY LUCKENBACH passed astern of the BENEVOLENCE and disappeared in the fog.

27. That almost at once the BENEVOLENCE stopped her engines, right full rudder still being carried by the BENEVOLENCE and the vessel listed to port where it settled momentarily. The list then increased rapidly and the vessel commenced to go down by the head. The rudder was shifted and the port anchor let go at 1710. The vessel then slowly rolled over to a 90° list and continued sinking by the head until at 1738 it sank in about 75 feet of water in the following position: Latitude 37°47'45" N., longitude 122°33'07" W. bearing 253° true, 4,200 yards from Mile Rock Light.

28. That the last known fix of the S.S. MARY LUCKENBACH was that of passing under the center of Golden Gate Bridge at 1635, speed 15 knots.

29. That the last known fix of the BENEVOLENCE was at Channel Buoy No. 8, which at 1650 bore 066° true, distance 75 yards, speed 16 knots.

30. That the fix of the BENEVOLENCE is accepted for the reason that it was obtained only five minutes before the collision under the supervision of an officer acting solely in the capacity of navigator, LCDR Shocken, thus only five minutes of dead reckoning had been run.

31. That in the absence of accurate bearings of any description and with the BENEVOLENCE making 91 RPM from 1644 to 1652--three minutes before the collision--and with due consideration to the factors of speed and rudder movements after 1652, the best estimate of the point of collision is latitude 37°46'57" North, longitude 122°33'53" West.

32. That the best calculated estimate of the speed of the BENEVOLENCE at moment of impact was 15 knots.

33. That the best calculated estimate of the speed of the MARY LUCKENBACH at moment of impact was 12 knots.

34. That an inspection of the damage sustained by the MARY LUCKENBACH revealed that the port anchor had carried away, one set of bitts, port side, carried away, port side set in about five feet from stem to hawse pipe and port side folded up with opening from stem to frame 24. The port side of bridge also was folded up. The forepeak was flooded and three feet of water found in the chain locker. Soundings indicated the remainder of the holds were normal.

35. That the MARY LUCKENBACH reported to the Luckenbach Steamship Company by radiotelephone a few minutes after the collision. That the next report was by radio at 1756 to the U. S. Coast Guard. The personnel of the MARY LUCKENBACH, unaware of the identity of the colliding vessel, did not send a "CQ" in plain language to determine identity or condition.

36. That the first knowledge of the serious result to the BENEVOLENCE by the personnel on board the MARY LUCKENBACH was the landing of some of the survivors of the BENEVOLENCE at about 1833 on board the MARY LUCKENBACH from a Coast Guard craft. The starboard lifeboat No. 1, one of two 75-person boats, was then lowered and picked up about 35 survivors and towed in two life rafts with 50 survivors, bringing them to the MARY LUCKENBACH where they later embarked on an Army tug. Numerous small craft alongside prevented lowering of the port lifeboat.

37. That at 2348 the MARY LUCKENBACH got underway for San Francisco and docked at 0230, 26 August, 1950, disembarking four survivors to U. S. Navy ambulances.

38. That no casualties were suffered by the personnel of the MARY LUCKENBACH.

39. That from the time of collision until the vessel sank, twenty-five minutes had elapsed. The first list to port was followed by a further listing and settling by the head, bringing the main deck to sea level within five minutes. The vessel then remained somewhat stationary at about a 45° list and slowly capsized on her port side.

40. That the lifeboats of the BENEVOLENCE consisted of the following;

6 - 35-foot lifeboats, each of 135-person capacity - 810 persons
6 - 31-foot lifeboats, each of 75-person capacity - 450 persons
Total - 1,260 persons

(Of the above, the 31-foot lifeboats were nested in the 35-foot lifeboats; 3 nests to starboard and 3 nests to port, under Welin gravity davits.)

4 - motor whaleboats

(Two on port and starboard side forward, two on port and starboard side aft. The two forward were under Welin gravity davits and the two aft were under Crescent davits.)

41. That the life floats of the BENEVOLENCE consisted of the following;

Life floats totaled 16: 4 - 60-person capacity - 240 persons
6 - 40-person capacity - 240 persons
6 - 20-person capacity - 120 persons

Total capacity of life floats - 600 persons.

All life floats were equipped for automatic or hand release.

42. That of the total lifeboats only the after starboard motor whaleboat was released.

43. That the reason other lifeboats were not launched is attributable to several factors, the predominant one being the quick list of the vessel to port. Contributory factors was the belief of Captain Bacon that the vessel would not sink, therefore no word was ever given to abandon ship; the severity of the port list was too great to allow launching of the starboard boats; the weight of the boats prevented removal of the locking bars; the use of shackles instead of pelican hooks on the gripes; the grouping of the entire mixed personnel in the vicinity of lifeboats; the lack of knowledge of boat stations and the failure to have previously conducted any emergency drills whatsoever; and the absence of power.

44. That it is not known how many life floats were released although several were sighted in the water after the sinking.

45. That the survivors were rescued by various small craft of different types belonging to the U. S. Coast Guard, U. S. Navy, U. S. Army, fishermen and yachtsmen.

46. That the casualties of the BENEVOLENCE were stated to be as follows as of 18 September, 1950:

	Dead	Missing
U. S. Navy	9	2
Civilian MSTS	10	0
Civilian Civil Service	2	0

47. That an attempt to send an S.O.S message by radio from the BENEVOLENCE was made but it was later discovered the antenna had been previously disconnected. The attempt was, therefore, unsuccessful. At 1700 Navy Radio, San Francisco, California, received a message from the BENEVOLENCE indicating the existing emergency and at 1704 received a message giving the position of that vessel and the need for "emergency" assistance. Efforts to then contact the BENEVOLENCE by radio were unsuccessful. This emergency message was received by the Rescue Coordination Center, U. S. Coast Guard at 1721, which commenced rescue operations at 1722, although such operations were hampered by low visibility.

48. That such watertight integrity as was maintained by the BENEVOLENCE was destroyed by the damage sustained as a result of the collision.

49. That the construction of the BENEVOLENCE rendered that vessel highly susceptible to the type of slashing blow inflicted. Damage suffered below the water line is not known. Damage sighted was as follows: A hole extending upwards, five to ten feet high, from three to five feet above the water line and in length from frame 50 aft to about frame 72 or 77, a distance of about 50 feet, with one or two strakes of shell plating ripped out. This resulted almost immediately in flooding compartments between frames 13 and 32, 32 and 56, 56 and 82, and possibly aft of frame 82.

50. That the personnel of both vessels were orderly and good discipline prevailed throughout with no evidence of panic."

5. The Board expressed the following Conclusions:

"1. That contributing factors to the seriousness of this casualty were: (a) failure to provide proper station bills numbered for each crew member of the BENEVOLENCE in the event of an emergency; (b) failure to exercise the crew or to conduct any fire, collision, and abandon ship drills on the BENEVOLENCE before proceeding to the open sea; and (c) the incorrect estimate of the situation by the Commanding Officer of the BENEVOLENCE, who failed to immediately order "abandon ship," which resulted in delaying efforts to launch the lifeboats.

2. That due to the rapid list to port, lifeboats could not have been launched from the BENEVOLENCE after the first few minutes.

3. That personnel of the MARY LUCKENBACH were unfamiliar with routine radar adjustments.

4. That both the Commanding Officer of the U. S. Navy Hospital Ship BENEVOLENCE, Captain Barton E. Bacon, Jr., USN, and the Master of the S.S. MARY LUCKENBACH, Leonard C. Smith, are considered at fault for allowing their vessels to proceed at excessive speed in a thick fog in the vicinity of the Main Ship Channel, San Francisco Harbor, California, and that such excessive speed by both vessels was the primary cause of the collision.

5. That although the Commanding Officer of the BENEVOLENCE had directed the sending of an S.O.S. immediately following the collision and although the Radio Electrician operated the key on the 500 kilocyle band, this attempt was futile as the antenna had been previously disconnected.

6. That of the nine U. S. Navy personnel assigned to security patrol for the day on the BENEVOLENCE, eight were in the mess room or chow line at the time of the collision. As a result of the absence of these men from their stations, they were unable to execute Captain Bacon's order to close watertight doors. The open or closed position of these doors during and immediately following the collision thus remains in doubt.

7. That the maneuvers of the BENEVOLENCE in using the full right rudder instead of meeting the shock head-on, while in extremis and with limited maneuvering space, exposed the port side of that vessel. This action, although probably instinctive, worsened an already critical situation.

8. That the U. S. Coast Guard is without jurisdiction in the matter of U. S. Navy personnel attached to the BENEVOLENCE.

9. That the civilian personnel attached to the BENEVOLENCE were in the status of observers and therefore not employed under their licenses or merchant mariner's documents. Therefore, the U. S. Coast Guard is without jurisdiction in the matter."

6. The Board made the following Recommendations:

"1. That in the field of radar, Headquarters consider the desirability of initiating and establishing certain standard requirements for licensed deck officers for the betterment of radar use on merchant vessels so equipped.

Chief, MVI Division to
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Via: Chief, Office of MTS

MVI
11 January, 1951
File: (MARY LUCKENBACH -
MSTS BENEVOLENCE a-12 Rd)

2. That the Master of the S.S. MARY LUCKENBACH, Leonard C. Smith, be charged under R. S. 4450, as amended, for allowing his vessel to proceed at excessive speed in a fog, thereby contributing to the collision."

REMARKS

7. Conclusion 4 of the Board that states that the subject collision was caused by the excessive speeds in fog on the part of both vessels in direct violation of the statutory collision regulations is fully concurred with. The elements involved in the operation of both vessels prior to the collision such as visibility, time of sighting the other vessel, use of engines, use of rudders, and avoiding action, set forth in Findings of Fact 7, 8, 10, 24, 25, and 26 are conflicting and not entirely consistent with Conclusion 4 of the Board.

8. The Board recommends that HQ consider the desirability of initiating and establishing certain standard requirements for licensed deck officers for the betterment of radar used on merchant vessels so equipped. The Coast Guard has issued a publication entitled "ELECTRONIC NAVIGATIONAL AIDS" (Revised Edition 1949), which publication contains educational information with respect to radar on merchant vessels covering such topics as selection and installation of radar on board merchant vessels, description of radar components, advantages and limitations of radar, etc. This publication is available to all persons in the interest of safety of life at sea. Questions on the subject of radar are also contained in examinations for deck officer licenses. Radars installed on merchant vessels require very little or no technical training and their operation, including operational adjustments, is fully covered by the manufacturer's handbook. All deck officers on merchant vessels responsible for the operation of radar on board merchant vessels should either receive a brief course in the operation of radars or receive equivalent instruction on board vessels under competent personnel. It is emphasized, however, that the use of radar on board any vessel is merely an aid to navigation and does not authorize nor in any way dispense with the necessity for full compliance with statutory collision regulations, conformance with which would have prevented this collision.

9. It appears that while carrying out its statutory duty to inquire into and determine whether or not any materiel failures, personnel faults, or violations of the law on the part of the BENEVOLENCE, a public vessel of the United States, caused or contributed to the cause of the collision, the Board somewhat exceeded the limited purposes for which investigations under R. S. 4450 are conducted.

10. It is noted that the testimony in the record of subject casualty consists of 950 pages. In view of the limited purposes for which marine casualties and accidents are investigated under the provisions of R.S.4450, as amended, the repetitious questioning of witnesses covering the same

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MVI
11 January, 1951
File: (MARY LUCKENBACH -
MSTS BENEVOLENCE a-12 Bd)

ground and particularly the argumentative examination and cross examination of witnesses on hypothetical propositions by parties in interest should have been discouraged.

11. Subject to the foregoing remarks, it is recommended that the Findings of Fact, Conclusions, and Recommendations of the Marine Board of Investigation be approved.

/s/ EDW. C. CLEAVE
EDW. C. CLEAVE

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27 February, 1951
(MARY LUCKENBACH-
MSTS BENEVOLENCE a-12 Bd)

From: Chief, Office of Merchant Marine Safety
To: Commandant

Forwarded, recommending approval.

/s/ H. C. SHEPHEARD
H. C. SHEPHEARD

APPROVED: 5 March, 1951

/s/ MERLIN O'NEILL
MERLIN O'NEILL
Vice Admiral, U.S. Coast Guard
Commandant